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# CD8 α-chain sequences

NM\_001768 & M27161 Homo sapiens (Human) Complete CD8 alpha mRNA

# Predicted polypeptide sequence

MALPVTALLLPLALLLHAARPSQFRVSPLDRTWNLGETVELKCQ

VLLSNPTSGCSWLFQPRGAAASPTFLLYLSQNKPKAAEGLDTQRFSGKRLGDTFVLTL

SDFRRENEGYYFCSALSNSIMYFSHFVPVFLPAKPTTTPAPRPPTPAPTIASQPLSLR

PEACRPAAGGAVHTRGLDFACDIYIWAPLAGTCGVLLLSLVITLYCNHRNRRRVCKCP

RPVVKSGDKPSLSARYV

1	gaaatcagge teegggeegg eegaagggeg caacttteee eecteggege eecacegget
61	cccgcgcgcc tcccctcgcg cccgagcttc gagccaagca gcgtcctggg gagcgcgtca
121	tggccttacc agtgaccgcc ttgctcctgc cgctggcctt gctgctccac gccgccaggc
181	cgagccagtt ccgggtgtcg ccgctggatc ggacctggaa cctgggcgag acagtggagc
241	tgaagtgcca ggtgctgctg tccaacccga cgtcgggctg ctcgtggctc ttccagccgc
301	geggegeege egecagteee acetteetee tatacetete ecaaaacaag eccaaggegg
361	ccgaggggct ggacacccag cggttctcgg gcaagaggtt gggggacacc ttcgtcctca
421	ccctgagcga cttccgccga gagaacgagg gctactattt ctgctcggcc ctgagcaact
481	ccatcatgta cttcagccac ttcgtgccgg tcttcctgcc agcgaagccc accacgacgc
541	cagegeegeg accaecaaca eeggegeeea eeategegte geageeeetg teeetgegee
601	cagaggcgtg ccggccagcg gcggggggcg cagtgcacac gagggggctg gacttcgcct
661	gtgatatcta catctgggcg cccttggccg ggacttgtgg ggtccttctc ctgtcactgg
<b>721</b>	ttatcaccct ttactgcaac cacaggaacc gaagacgtgt ttgcaaatgt ccccggcctg
781	tggtcaaatc gggagacaag cccagcettt cggcgagata cgtctaaccc tgtgcaacag
841	ccactacatt acttcaaact gagateette ettttgaggg agcaagteet teeettteat
901	tttttccagt cttcctccct gtgtattcat tctcatgatt attattttag tggggggggg
961	gtgggaaaga ttactttttc tttatgtgtt tgacgggaaa caaaactagg taaaatctac
	agtacaccac aagggtcaca atactgttgt gcgcacatcg cggtagggcg tggaaagggg
1081	caggccagag ctacccgcag agttctcaga atcatgctga gagagctgga ggcacccatg
	ccatctcaac ctcttccccg cccgttttac aaagggggag gctaaagccc agagacagct
	tgatcaaagg cacacagcaa gtcagggttg gagcagtagc tggagggacc ttgtctccca
	getcaggget ettteeteea eaceatteag gtetttettt eegaggeeee tgtetcaggg

1321 tgaggtgctt gagtctccaa cggcaaggga acaagtactt cttgatacct gggatactgt
1381 gcccagagcc tcgaggaggt aatgaattaa agaagagaac tgcctttggc agagttctat
1441 aatgtaaaca atatcagact ttttttttt ataatcaagc ctaaaattgt atagacctaa
1501 aataaaatga agtggtgagc ttaaccctgg aaaatgaatc cctctatctc taaagaaaat
1561 ctctgtgaaa cccctatgtg gaggcggaat tgctctccca gcccttgcat tgcagagggg
1621 cccatgaaag aggacaggct acccctttac aaatagaatt tgagcatcag tgaggttaaa
1681 ctaaggccct cttgaatctc tgaatttgag atacaaacat gttcctggga tcactgatga
1741 ctttttatac tttgtaaaga caattgttgg agagcccctc acacagccct ggcctctgct
1801 caactagcag atacagggat gaggcagacc tgactctctt aaggaggctg agagcccaaa
1861 ctgctgtccc aaacatgcac ttccttgctt aaggtatggt acaagcaatg cctgcccatt
1921 ggagagaaaa aacttaagta gataaggaaa taagaaccac tcataattct tcaccttagg
1981 aataatctcc tgttaatatg gtgtacattc ttcctgatta ttttctacac atacatgtaa
2041 aatatgtett tettttttaa atagggttgt actatgetgt tatgagtgge tttaatgaat
2101 aaacatttgt agcatcctct ttaatgggta aacagcaaaa aaaaaaaaaa
2161 ааааааааа ааааааааа аааааааааа ааааааа
2221 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaaa aaaaa

NM\_171827

Homo sapiens secreted protein derived from alternate transcript

# Predicted polypeptide

MALPVTALLLPLALLLHAARPSQFRVSPLDRTWNLGETVELKCQVLLSNPTSGCSWLFQPRGAAASPTFL LYLSQNKPKAAEGLDTQRFSGKRLGDTFVLTLSDFRRENEGYYFCSALSNSIMYFSHFVPVFLPAKPTTT PAPRPPTPAPTIASQPLSLRPEACRPAAGGAGNRRRVCKCPRPVVKSGDKPSLSARYV

1 gaaatcaggc teegggeegg eegaagggeg caacttteee eecteggege eecaeegget
61 eccgegegee teccetegeg eccgagette gagecaagea gegteetggg gagegegtea
121 tggccttacc agtgaccgcc ttgctcctgc cgctggcctt gctgctccac gccgccaggc
181 cgagccagtt ccgggtgtcg ccgctggatc ggacctggaa cctgggcgag acagtggagc
241 tgaagtgcca ggtgctgctg tccaacccga cgtcgggctg ctcgtggctc ttccagccgc
301 geggegeege egecagteec acetteetee tatacetete ecaaaacaag eccaaggegg
361 ccgaggggct ggacacccag cggttctcgg gcaagaggtt gggggacacc ttcgtcctca
421 ccctgagega etteegeega gagaaegagg getaetattt etgeteggee etgageaaet
481 ccatcatgta cttcagccac ttcgtgccgg tcttcctgcc agcgaagccc accacgacgc
541 cagegeegeg accaecaaca eeggegeeca ceategegte geageeetg teeetgegee
601 cagaggegtg ceggecageg geggggggeg cagggaaceg aagaegtgtt tgcaaatgte
661 cccggcctgt ggtcaaatcg ggagacaagc ccagcctttc ggcgagatac gtctaaccct
721 gtgcaacagc cactacatta cttcaaactg agatccttcc ttttgaggga gcaagtcctt
781 ccctttcatt ttttccagtc ttcctccctg tgtattcatt ctcatgatta ttattttagt
841 gggggcgggg tgggaaagat tactttttct ttatgtgttt gacgggaaac aaaactaggt
901 aaaatctaca gtacaccaca agggtcacaa tactgttgtg cgcacatcgc ggtagggcgt
961 ggaaaggggc aggccagagc tacccgcaga gttctcagaa tcatgctgag agagctggag
1021 gcacccatgc catetcaacc tetteccege cegttttaca aagggggagg ctaaagecca
1081 gagacagett gatcaaagge acacagcaag teagggttgg ageagtaget ggagggaeet
1141 tgtctcccag ctcagggctc tttcctccac accattcagg tctttctttc cgaggcccct
1201 gtctcagggt gaggtgcttg agtctccaac ggcaagggaa caagtacttc ttgatacctg
1261 ggatactgtg cccagagcct cgaggaggta atgaattaaa gaagagaact gcctttggca
1321 gagttctata atgtaaacaa tatcagactt ttttttttta taatcaagcc taaaattgta
1381 tagacctaaa ataaaatgaa gtggtgagct taaccctgga aaatgaatcc ctctatctct
1441 aaagaaaatc tetgtgaaac eectatgtgg aggeggaatt geteteecag eeettgeatt
1501 gcagaggggc ccatgaaaga ggacaggcta cccctttaca aatagaattt gagcatcagt
1561 gaggttaaac taaggccctc ttgaatctct gaatttgaga tacaaacatg ttcctgggat
1621 cactgatgac tttttatact ttgtaaagac aattgttgga gagcccctca cacagccctg
1681 geetetgete aactageaga tacagggatg aggeagacet gaetetetta aggaggetga

- 1741 gagcccaaac tgctgtccca aacatgcact tccttgctta aggtatggta caagcaatgc
- 1801 ctgcccattg gagagaaaaa acttaagtag ataaggaaat aagaaccact cataattctt
- 1861 caccttagga ataatctcct gttaatatgg tgtacattct tcctgattat titctacaca
- 1921 tacatgtaaa atatgtcttt cttttttaaa tagggttgta ctatgctgtt atgagtggct

X60223 Pongo pygmaeus (Orangutan) Complete CD8 alpha mRNA

#### **Predicted polypeptide**

MALPVTALLLPLALLLHAARPSQFRVSPLDRTWNLGETVELKCQ
VLLSNPTSGCSWLFQPRGAAASPTFLLYLSQNKPKAAEGLDTQRFSGKRLGDTFVLTL
SDFRRENEGYYFCSALSNSIMYFSHFVPVFLPVHTRGLDFACDIYIWAPLAGTCGVLL
LSLVITLYCNHRNRRRVCKCPRPVVKSGGKPSLSERYV

#### **mRNA**

1 atggccttac ccgtgaccgc cttgctcctg ccgctggct tgctgctcca cgccgccagg
61 ccgagccagt tccgggtgtc gccgctggat cggacctgga acctgggcga gacggtggag
121 ctgaagtgcc aggtgctgct gtccaacccg acgtctggct gctcctggct cttccagccg
181 cgtggcgccg ccgccagtcc caccttcctc ctatacctct cccaaaacaa gcccaaggcg
241 gccgaggggc tggacaccca gcggttctcg ggcaagaggt tgggggacac cttcgtcctc
301 accctgagcg acttccgccg ggagaacgaa ggctactatt tctgctcggc cctgagcaac
361 tccatcatgt acttcagcca cttcgtgccg gtcttcctgc cagtgcacac gagggggctg
421 gacttcgcct gtgatatcta catctgggcg cccttggccg ggacctgtgg ggtccttctc
481 ctgtcactgg ttatcaccct ttactgcaac cacaggaacc gaagacgtgt ttgcaaatgt

541 ccccggcctg tggtcaaatc tggaggcaag cccagccttt cggagagata tgtctaa

XM\_132621 & BC030679 & U34881 Mus musculus (Mouse) Complete CD8 alpha mRNA

#### **Predicted** polypeptide

MASPLTRFLSLNLLLLGESIILGSGEAKPQAPELRIFPKKMDAE

LGQKVDLVCEVLGSVSQGCSWLFQNSSSKLPQPTFVVYMASSHNKITWDEKLNSSKLF

SAMRDTNNKYVLTLNKFSKENEGYYFCSVISNSVMYFSSVVPVLQKVNSTTTKPVLRT

PSPVHPTGTSQPQRPEDCRPRGSVKGTGLDFACDIYIWAPLAGICVALLLSLIITLIC

YHRSRKRVCKCPSIACLCLKLQGSKWYESVICSALAVSIRCNKSKSGELPLAVHLDIR

APCKNWEIAGSLVERYGKSGKHSPLSLKAVVESN

#### **mRNA**

- 1 atggcctcac cgttgacccg ctttctgtcg ctgaacctgc tgctgctggg tgagtcgatt
- 61 atcctgggga gtggagaagc taagccacag gcacccgaac tccgaatctt tccaaagaaa
- 121 atggacgccg aacttggtca gaaggtggac ctggtatgtg aagtgttggg gtccgtttcg
- 181 caaggatget ettggetett eeagaactee ageteeaaac teeceeagee eacettegtt
- 241 gtctatatgg cttcatccca caacaagata acgtgggacg agaagctgaa ttcgtcgaaa
- 301 ctgttttctg ccatgaggga cacgaataat aagtacgttc tcaccctgaa caagttcagc
- 361 aaggaaaacg aaggctacta tttctgctca gtcatcagca actcggtgat gtacttcagt
- 421 tctgtcgtgc cagtccttca gaaagtgaac tctactacta ccaagccagt gctgcgaact
- 481 ccctcacctg tgcaccctac cgggacatct cagccccaga gaccagaaga ttgtcggccc
- 541 cgtggctcag tgaaggggac cggattggac ttcgcctgtg atatttacat ctgggcaccc
- 601 ttggccggaa tctgcgtggc cettctgctg tccttgatca tcactctcat ctgctaccac
- 661 aggagccgaa agcgtgtttg caaatgtccc agtatagcat gcttgtgcct caaactgcaa
- 721 ggaagcaagt ggtatgaatc tgtgatctgc tcagctctgg ctgtgagcat cagatgtaac
- 781 aaatcaaagt caggagaact gcctttagcg gtgcacctgg acatcagagc cccttgtaag
- 901 ctgtcactga aggctgtagt agaatccaat taa

#### Predcited polypeptide

MDAELGQKVDLVCEVLGSVSQGCSWLFQNSSSKLPQPTFVVYMA
SSHNKITWDEKLNSSKLFSAMRDTNNKYVLTLNKFSKENEGYYFCSVISNSVMYFSSV
VPVLQKVNSTTTKPVLRTPSPVHPTGTSQPQRPEDCRPRGSVKGTGLDFACDIYIWAP
LAGICVALLLSLIITLICYHRSRKRVCKCPRPLVRQEGKPRPSEKIV

# **mRNA**

1 0	egttgacccg ctttctgtcg ctgaacctgc tgctgctggg tgagtcgatt atcctgggga
61	gtggagaagc taagccacag gcacccgaac tccgaatctt tccaaagaaa atggacgccg
	aacttggtca gaaggtggac ctggtatgtg aagtgttggg gtccgtttcg caaggatgct
	cttggetett ecagaactee ageteeaaac teeceeagee eacettegtt gtetatatgg
	cttcatccca caacaagata acgtgggacg agaagctgaa ttcgtcgaaa ctgttttctg
	ccatgaggga cacgaataat aagtacgttc tcaccctgaa caagttcagc aaggaaaacg
	aaggetacta tttetgetea gteateagea aeteggtgat gtaetteagt tetgtegtge
421	cagtccttca gaaagtgaac tctactacta ccaagccagt gctgcgaact ccctcacctg
481	tgcaccctac cgggacatct cagccccaga gaccagaaga ttgtcggccc cgtggctcag
541	tgaaggggac cggattggac ttcgcctgtg atatttacat ctgggcaccc ttggccggaa
601	tctgcgtggc ccttctgctg tccttgatca tcactctcat ctgctaccac aggagccgaa
661	agegtgtttg caaatgteee aggeegetag teagacagga aggeaageee agacetteag
721	agaaaattgt gtaaaatggc accgccagga agctacaact actacatgac ttcagatctc
781	ttcttgcaag aggccaggcc ctcctttttc aagtttcctg ctgtcttatg tattgccctc
841	tgtattgttt tagtaggggt gtgatgggga cagttccttt ttctttatga attctctttg
901	acacaaagca tacttgtatg catacaatgg gagtaatgag cagactgtaa caccagagct
961	agttccagtt tcggggtcca tgtcgctggt ggcctcagca cccacttgat ataaatctcc
1021	tgtctgccca tcatatagaa gaagctgaag atcagaggtg gaaacagcag gatctgtaga
1081	cccggagaga acccaagcta gaggaaccct cactgactgg tgcagggatc tcaccccat
141	cccctgaget etetgtttag gtatgtgtet ttagtatage atgettgtge eteaaactge
201	aaggaagcaa gtggtatgaa tctgtgatct gctcagctct ggctgtgagc atcagatgta
261	acaaatcaaa gtcaggagaa ctgcctttag cggtgcacct ggacatcaga gccccttgta
321	agaactggga aattgctggc agtctagtgg agcggtacgg taaatctgga aaacactccc
381	ctctgtcact gaaggetgta gtagaatcca attaaageta ttcaaaccac aaaaaaaaaa
441	aaaaaaaaaa aa

# Predicted polypeptide

MASPLTRFLSLNLLLMGESIILGSGEAKPQAPELRIFPKKMDAE

LGQKVDLVCEVLGSVSQGCSWLFQNSSSKLPQPTFVVYMASSHNKITWDEKLNSSKLF

SAVRDTNNKYVLTLNKFSKENEGYYFCSVISNSVMYFSSVVPVLQKVNSTTTKPVLRT

PSPVHPTGTSQPQRPEDCRPRGSVKGTGLDFACDIYIWAPLAGICVAPLLSLIITLIC

YHRSRKRVCKCPRPLVRQEGKPRPSEKIV

1 atggcctcac cgttgacccg ctttctgtcg ctgaacctgc tgctgatggg tgagtcgatt
61 atcctgggga gtggagaage taagccacag gcacccgaac tccgaatctt tccaaagaaa
121 atggacgccg aacttggcca gaaggtggac ctggtatgtg aagtgttggg gtccgtttcg
181 caaggatgct cttggctctt ccagaactcc agctccaaac tcccccagcc caccttcgtt
241 gtctatatgg cttcatccca caacaagata acgtgggacg agaagctgaa ttcgtcgaaa
301 ctgttttctg ccgtgaggga cacgaataat aagtacgttc tcaccctgaa caagttcagc
361 aaggaaaacg aaggctacta tttctgctca gtcatcagca actcggtgat gtacttcagt
421 tctgtcgtgc cagtccttca gaaagtgaac tctactacta ccaagccagt gctgcgaact
481 ccctcacctg tgcaccctac cgggacatct cagccccaga gaccagaaga ttgtcggccc
541 cgtggctcag tgaaggggac cggattggac ttcgcctgtg atatttacat ctgggcaccc
601 ttggccggaa tctgcgtggc ccctctgctg tccttgatca tcactctcat ctgctaccac
661 aggagccgaa agcgtgtttg caaatgtccc aggccgctag tcagacagga aggcaagccc
721 agaccttcag agaaaattgt gtaa

NM\_031538 Rattus norvegicus (Rat) Complete CD8 alpha mRNA

#### Predicted polypeptide

MASRVICFLSLNLLLLDVITRLQVSGQLQLSPKKVDAEIGQEVK
LTCEVLRDTSQGCSWLFRNSSSELLQPTFIIYVSSSRSKLNDILDPNLFSARKENNKY
ILTLSKFSTKNQGYYFCSITSNSVMYFSPLVPVFQKVNSIITKPVTRAPTPVPPPTGT
PRPLRPEACRPGASGSVEGMGLGFACDIYIWAPLAGICAVLLLSLVITLICCHRNRRR
VCKCPRPLVKPRPSEKFV

- 1 ccctagagec etagettgae etaaggtget ggtgggaege acaccatgge eteaegggtg
   61 atetgettte tgtegetgaa cetgetaetg etggatgtta teaetagget eeaggtttee
   121 ggaeagttae agttgteaec aaagaaagtg gaegetgaaa ttggeeagga ggtgaageta
   181 acatgegaag tgetgeggga eaettegeaa ggatgetett ggetetteeg gaaeteeage
- 241 tecgaactee tecageceae etteateate tatgtatett eateeeggag eaagetgaae 301 gatataetgg ateegaatet-gttetetgee eggaaggaaa acaacaaata eateeteace
- 361 ctgagcaagt tcagcactaa aaaccaaggc tactatttct gctcaatcac cagcaactcg
- 421 gtgatgtact tcagtcctct ggtgccggtg tttcagaaag tgaactctat tatcaccaag
- 481 ccggtgacgc gagctcccac accagtgcct cctcctacag ggacaccccg gccctacga
- 541 ccagaagett geegaeeegg ggegagtgge tcagtggagg gaatgggatt gggettegee
- 601 tgcgatattt acatctgggc accettggcc ggaatctgcg cggttcttct gctgtccctg
- 661 gtcatcactc tcatctgctg ccacaggaac cgaaggcgtg tttgcaaatg tcccaggccc
- 721 cttgtcaagc ccagaccttc agagaaattc gtgtaaaatg gcgccactag gaagccacaa
- 781 ctactacatg acttcagaga tttctcacaa gagaccgggc cctccttttt cagagtttcc
- 841 tgctggctta tatattgtcc tctgtattgt tttaggggta ggatggggac agttcctttt
- 901 tetttatgaa ttetetttga tacaaaacat aettgtatge acacaatggg gtaaagatea
- 961 gactgtaaca ccagagatag tcccagtttc agggtcagcg tagctggtgg

AY303773
Cavia porcellus (Guinea Pig)
Complete CD8 alpha mRNA
Predicted polypeptide

MAPRGSAWLLLLPVALLLDAATAQGASQFRMSPRELVAQVGTKV

TLRCEVLVPNAPAGCSWLFQPRHDAKGPTFLLYHSASGTKLAPGLEQKRFSPSKSSNT
YTLTVNSFQKRDEGYYFCSVSGNMMLYFSPFVPVFLPAPRTTTPPPPPTTPTPSVQPT
SVRPETCVVSKGAAGARWLDLSCDVYIWAPLASTCAALLLALVITIICHRRNRQRVCK
CPRPQARSGGKPSPSGKLV

#### <u>mRNA</u>

1 gcaacttccc cactgcgcat cccctggctc ctggtggctc ctgggcggct cccttcacgc
61 ctggactcca ggctctgccc tgcgccgagg agcgcgcgcc atggccccgc gaggaagcgc
121 etggetgetg etgetgeegg tggeeetget getegaegee geeaeggeee aaggtgeeag
181 tcagttccga atgtcacccc gtgaactggt cgcgcaagtc ggcaccaaag tgaccctgcg
241 ctgtgaggtg ctggtgccta acgcgccggc gggatgctcg tggctcttcc agccccgcca
301 cgacgccaaa ggtcccacct tcctcctgta ccattcggcg tccgggacca agttggcccc
361 agggctggaa cagaagcgat tcagcccctc gaagagcagt aacacctaca ccctcacggt
421 gaacagette cagaagegag acgaaggeta etaettetge teggteteeg geaacatgat
481 getetaette agecegtteg tteeegtett eetgeeaget eetegeacea egaegeeece
541 tececetece accaegeega ecceeagegt geageceaeg teggtgegee eegagaegtg
601 tgtggtctct aagggcgcag caggtgcgag gtggctggat ctctcctgtg atgtctacat
661 ctgggcgccc ctggccagca catgcgcggc ccttctgctg gcactggtca tcacgatcat
721 ctgccaccgc aggaacagac aacgcgtttg caaatgtcct aggccccaag ccaggtctgg
781 aggeaaaccc agccetteag ggaagttagt etaacaacat ggegeecage etgtgegaag
841 ccactacatg actttatact gagatcattc cttggacagc aagtgctcct cttttgggtt
901 teccagtett cettectatg tatttgttet cattactatt ttagtgggca tggggtggga
961 agagttgett tttegttaga caaaaaataa aaccatgtag catetgeage teacaagggt
1021 cacagggctg ttacctcaca caggggttag ggtagcaagc agggctctca ggtactggaa
1081 ttcactccct tccactcact tgagggtggg cagcacccac gggtcattta tccctcatca
1141 tgctcctcca cccacttgag ctcagatgcc acccaaagag cagtctatct aaacccaggc
1201 caaacacatg caactgcttt ttgaacccga gagcctaatt tatctgcaga gaatgcaagt
1261 geteettigt eacttatate tigteeatga eetttaataa atgtgetget titteeeteaa
1321 aaaaaaaaaa

NM\_174015 Bos taurus (Cow) Complete CD8 alpha mRNA

# **Predicted polypeptide**

MASLLTALILPLALLLLDAAKVLGSLSFRMSPTQKETRLGEKVE
LQCELLQSGMATGCSWLRHIPGDDPRPTFLMYLSAQRVKLAEGLDPRHISGAKVSGTK
FQLTLSSFLQEDQGYYFCSVVSNSILYFSNFVPVFLPAKPATTPAMRPSSAAPTSAPQ
TRSVSPRSEVCRTSAGSAVDTSRLDFACNIYIWAPLVGTCGVLLLSLVITGICYRRNR
RRVCKCPRPVVRQGGKPNLSEKYV

1 gaattcggat ccaccatggc ctcactcttg accgccctga tcctgccgct ggccctgctg
61 ctgctcgatg ccgccaaggt cctcgggtcg ctctcgttcc ggatgtcgcc gacgcagaag
121 gagaccagac tgggcgagaa ggtggagctg caatgcgagt tgctgcagtc cggcatggcg
181 acagggtget cetggeteeg ceacatacce ggggaegaee ecagaeceae etteetaatg
241 taccteteeg eccaaegggt caagetagee gagggaetgg acceeagaca cattteegge
301 gccaaggtet eeggeaceaa atteeagete accetgagea getteeteea ggaggaceaa
361 ggctactatt tttgctcggt cgtgagcaac tcgatactgt acttcagtaa cttcgtgcct
421 gtcttcttgc cagcgaagcc ggccaccacg ccggcgatgc ggccatccag cgcggcgccc
481 accagegege egeagactag gteggtetet eegegateag aggtgtgeeg gaceteggeg
541 ggcagcgcag tggacacgag ccggctggac ttcgcctgca atatctacat ctgggctccc
601 ttggtcggga cctgcggcgt ccttctcctg tcattggtca tcacaggcat ctgctaccgc
661 cggaaccgaa gacgtgtctg caaatgtccc aggcctgtgg tccgacaagg aggcaagccc
721 aacctttcag agaaatatgt ctaacatggc gatgggcccc gtgtgacagc cactacaaga
781 cttcgcactg agaactctcc tgagatcctt cccttttgat ttctccctgc ttccttcctt
841 ctcgttatta ttatttttca tgggggtggg gtgggaagag ttactttttc tttattattt
901 actttgatac aaaacaagac actcgtgtct aaggcatacc acaagggtta tcatgctgtt
961 gtgctcccat actcgggtag agggcgggcg ggccagagct accgcaagct ctattctcag
1021 aacctggctg tgagaactgg tgggggcctc ggcacccact cagccccaac ttctcctcca
1081 cccattttac aaaagaggac getgaggeec agagatgggg aacagetgga teagagteec
1141 agcagggctc cacacaactg agatctttct tctggaggcc tctgtctcag cgtggggagc
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1261 cacccagagc ctcgatgagg taatgaaata ggacaagaaa acttgacaga gttctgtgat
1321 actgctgaac aggatcagat tattttttt ataatcaagc atgaaatgat acagataata
1381 ggaattette caatgaagtg gaaggagtga aetgaatgat ggaaaatgag caacetgace
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1501 agaaggaccc tcaaagagga gaggccaccc tctgcaagca tgatttgagc gttaggaaag
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1681 ctggcacccc aggctagcag ctgagggaat gtgcagacac tggtgaggag gctacgagcc
1741 cagctgcagc cctacaaggc atttccttcc ttactgtgtt ctgcaaaaaaa tgcatgctca
1801 ctgggagaaa aaatgtagct aaggtagtaa gaatcatccg taattcttta cctcagggat
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1921 aaatatataa tttttaaaaa tgggattgca ctatgctttt ataaatggct ttaataaaca
1981 aacatttatg gcttacttct t

AY517855 Sus scrofa (Domestic pig) Complete CD8 alpha mRNA

# Predicted polypeptide

VELQCELMHSNTLTSCSWLYQKPGAASKPIFLMYLSKTRNKTAE
GLDTRYISGYKANDNFYLILHRFREEDQGYYFCSFLSNSVLYFSNFMSVFLPAKPTKT
PTTPPPKRTPTKASHAVSVAPEVCRPSGNADPRKLDLACDLYNWAPLVGTSGILLLSL
VITIICHRRNRRRVCKCPRPVVRQGGKASPSERFI

NA .
1 gtggagetge agtgegagtt gatgeaetee aacacaetga caagetgtte etggetetae
61 cagaageegg gggetgeete caageeeate tteeteatgt aceteteeaa aaceeggaat
121 aagacageeg aggggetgga caccegttac atetetggtt acaaggeeaa tgacaactte
181 tacctcatcc tgcaccgctt ccgcgaggag gaccaaggct actatttctg ctcgttcctg
241 agcaactcgg tittgtattt cagcaacttc atgtccgtct tcttgccagc aaagcccacc
301 aagacgccga ctacgccacc acccaagcgg actcccacca aagcgtcgca cgccgtgtct
361 gtggccccag aggtgtgccg gccttcgggc aacgcagacc cgaggaagct ggacctcgcc
421 tgtgatctgt acaactgggc gcccctggtt gggacctccg gcatccttct cctgtcactg
481 gtcatcacca tcatctgcca ccgccggaac agaagacgtg tttgcaaatg tcccaggccc
541 gtggtcagac agggaggcaa ggccagccct tcagagagat tcatctaaca tggcgacatg
601 ccccacgcag cagccactac aagacctcaa actgagacct ctccgggcag gagagcaagg
661 gteettteet tteegtttee eeageettee tteetteett aagtattett eteattatta
721 ttatttccat gggggtgggg tgggaagggt gactttttct ttgggtgttt actttaattg
781 acacaaaacg agactetate acgtetttgg tacgccgcag gggttcgaac accgttgtgc
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901 ccaggctgtg agagctggtg gggggtgggg aggccctcgg cacccacaca ggccaaacct
961 ctccccctgc cccccatttt acaaaggaat gaggctgagg cccagagatg gggggtggct
1021 ggatcagage cecageaagg etecaggete atectecaea geatttggge etetetteea
1081 ggggcctctg tctcagctgg gggagctgtg tctcccacct caaggaaaca aggtttgctt
1141 gggcacctgt gatagactct gcactgtgcc cagagccccg gggaggcaat gcagtaagtc
1201 aaggggacgt gacagaggtc tacggtgcag ttgaacagga tcagatatat tttttttaat
1261 aatccagcat gaagttatat agataacagg aattcctcaa atagagtgga agggctgaac
1321 tgaatcctgg aaagtgaaca acacgacctc taaaggaaat ccaatgcaaa aaatctctaa
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1561 gaccgagtag ctggcctccc ctggaccagc agctgtggat atggggcaga ctctgatgag

- 1621 gaggetagga geceagactg etgeceteta egegeattte etetettaac eatgttgtac
- 1681 aagaaatgcg tgctcgctgg aagaaaaaac taaataataa gagtcaccca taattcttta
- 1741 cttctggtat aactcattgt taatattatg gtgtacattc ttcctgatta ttttctatgc
- 1801 acgtatataa aatgtatact ttttaaaaat ggaattgtac tatgctttta gaagtggttt
- 1861 taataaacat ttctgctatg aaaaaaaaa a

D16536
Felis catus (cat)
Complete CD8 alpha mRNA
Predicted polypeptide

MASPVTAQLLPLALLLHAAAAAGPSPFRLSPVRVEGRLGQRVEL
QCEVLLSSAAPGCTWLFQKNEPAARPIFLAYLSRSRTKLAEELDPKQISGQRIQDTLY
SLTLHRFRKEEEGYYFCSVVSNSVLYFSAFVPVFLPVKPTTTPAPRPPTQAPITTSQR
VSLRPGTCQPSAGSTVEASGLDLSCDIYIWAPLAGTCAFLLLSLVITVICNHRNRRRV
CKCPRPVVRAGGKPSPSERYV

- alggcetete eggtgaetge ceageteetg eegetggeet tgetgettea tgeegeegea
   geegeeggge egageeegtt eegettateg eeegtgaggg tggagggeag geteggeeag
- 121 cgggtggagc tgcagtgcga ggtgctgctg tccagcgcgg cgccgggctg cacctggctc
- 181 ttccagaaga acgaacetge egecegeece atetteetgg egtacetete cagaageegg
- 241 accaagttgg ccgaggagct ggaccccaaa cagatctcgg gccagaggat tcaggacacc
- 301 ctctacagtc tcaccctgca cagattccgc aaggaggaag aaggctacta tttctgctcg
- 361 gtcgtgagca actccgttct gtacttcagc gccttcgtcc cggtcttcct gccagtcaag
- 421 cccaccacta cgcccgcgcc gcgaccgccc acgcaggcgc ccatcaccac gtcgcagcgg
- 481 gtgtctctgc gcccggggac ctgccagcct tcagcgggca gcacagtgga agcaagtggg
- 541 ctggatttgt cctgtgacat ctacatctgg gcacccctgg ctgggacctg cgccttcctt
- 601 ctcctgtcgc tggtcatcac cgtcatctgc aaccacagga accgaagacg tgtttgcaaa
- 661 tgtccgaggc ccgtggtcag agcaggaggc aagcctagcc cgtcagagag atacgtctaa
- 721 catggagatg ggccccatgc accagccact acaagaccaa ataaaactct ctttatgagg
- 781 acagt

AY065643
Sigmodon hispidus (Hispid cotton rat)
Complete CD8 alpha mRNA
Predicted polypeptide

MAPRVTRFLCLTLLLEFIAELGGSKDFEMSPKKVVAHLGKEVRL

TCEVWVSTSQGCSWLFLEHGSGVKPTFLIYLSGSRNERNNKIPSTKLSGKKEDKKYTL
TLNNFAKEDEGYYFCSVTSNSVVYFSPLVSVFLPEKPTTPVPKPPTSVPTTAISRSLR
PEACRPGAGTSVEKKGWDFDCDIIILAPLAGLCGVLLLSLVTTLICCHRNRKRVCKCP
RPVVRQGGKPSPSGKLV

•
1 ctcctgcttg acctaagetg ctggtggaag cactgccatg geeeeeeggg tgaccegett
61 totgtgcotg accotgctgc tggaatttat cgctgagctc ggaggctcga aagatttcga
121 aatgtctcct aagaaggtgg tcgcccacct tggcaaggag gtgaggctaa catgcgaagt
181 gtgggtgtct acttcgcaag gatgctcttg gctcttcctg gagcatggct ccggagttaa
241 acceacttte etcatetate tetetgggag eegcaacgaa eggaataaca aaatacette
301 aactaagcta tetgggaaga aggaagacaa aaagtacacc etcaccetga ataattttgc
361 taaggaagac gaaggctact atttctgctc tgtcacaagc aactcggtgg tgtacttcag
421 tectetegtg teggtettte tgecagagaa acetaceaca ceagtgeega aaceaceac
481 atcagtgccc actacggcga tateteggtc cetgegacca gaagettgcc gacetggage
541 cggcacctca gtggagaaga agggatggga cttcgactgt gatatcatca ttttggcacc
601 cttagctgga ctctgtgggg tccttctgct gtctctggtc accacactca tctgctgcca
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961 gttgctgcgt acatagcatg tgggggaagt acagaacagc tgtctgggtt ctcaggatca
1021 gtggatgatc agcacccact tgatgatcta aatgccctgt ctgcccatta tatagaagag
1081 gttgaaggtc agaaatgggg tgggcaggat ctgtgcacca ggagagaacc caagctgacg
1141 aaateeteae tggatggete agggaaettg eetetatate etgagttete tttatteagg
1201 cctgtgcctg gtagtgtgta ggctgagta

AJ130818
Saimiri sciureus (Common Squirrel Monkey)
Complete CD8 alpha mRNA

# Predicted polypeptide

MASPVTALLLPLALLLHAARPSRFRVSPLDRTWNLGDKVELKCE
VLLSNPSSGCSWLFQKRGAAASPTFLLYISQTKPKVADGLDAQRFSGKKMGDSFILTL
RDFREEDQGFYFCSALSNSIMYFSPFVPVFLPAKPTTTPAPRPPTPEPTTASQPLSLR
PQACRPPAGGAVDTRGLDFACDIYIWVPLAGTCGVLLLSLVITVYCNHRNRRRVCKCP
RPAVKSGGKPSPSERYV

- 1 atggcctctc ccgtgaccgc cttgctcctg ccgctggccc tgctgctcca cgctgccagg
- 61 ccgagccggt tccgggtgtc gccgctggat cggacctgga acttgggcga caaggtggag
- 121 ctgaagtgcg aggtgctgct gtccaacccg tcctcgggct gctcgtggct cttccagaag
- 181 cgcggcgctg ccgccagccc caccttcctc ctgtacatct cccaaaccaa gcccaaggtg
- 241 gccgatgggc tggacgccca gcgcttctcc ggcaagaaga tgggggacag cttcattctc
- 301 accetgegeg actteegega ggaggaceag ggettetatt tetgetegge eetgageaac
- 361 tocatcatgt acttcagccc cttcgtgccg gtcttcctgc cagcgaagcc caccacgacg
- 421 ccagegeege gaccacceae aceggageee aceaeegegt egeageeeet gteeetgegt
- 481 ccacaggett gccggccccc ggcgggggc gcagtggaca cgagggggct ggacttcgcc
- 541 tgtgatatct acatctgggt gcccttggcc gggacctgcg gggtccttct cctgtcactg
- 601 gtcatcaccg tttattgcaa tcacaggaac cgacgacgtg tttgcaaatg tccccggcct
- 661 geggtcaagt etggaggeaa geceageeet teggagagat aegtetaa

# Domains of the CD8 $\alpha$ -Chains

#### Leader

Transmembrane

Human CD8 a-Chain

Protein:

MALPVTALLIPLALLIHAARPSQFRVSPLDRTWNLGETVELKCQVLLSNPTSGCSWLFQPRGAAASPTFLLYLSQNKPKAAEGLDTQRFSGKRLGDTFVLTLSDFRRENEGYYFCSALSNSIMYFSHFVPVFLPAKPTTTPAPRPPTPAPTIASQPLSLRPEACRPAAGGAVHTRGLDFACDIYIWAPLAGTCGVLLLSLVITLYCNHRNRRRVCKCPRPVVKSGDKPSLSARYV

mRNA - coding

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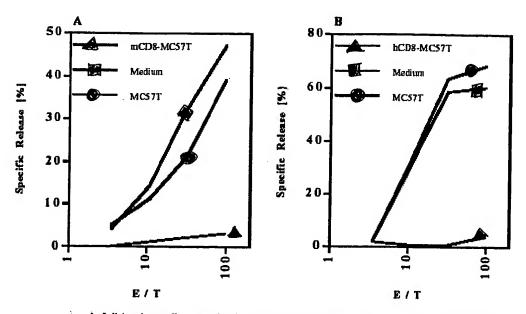
#### mouse CD8 α-Chain

#### Protein:

MASPLTRFLS LNLLLLGESI ILGSGEAKPQ APELRIFPKK MDAELGQKVD LVCEVLGSVS QGCSWLFQNS SSKLPQPTFV VYMASSHNKI TWDEKLNSSK LFSAMRDTNN KYVLTLNKFS KENEGYYFCS VISNSVMYFS SVVPVLQKVN STTTKPVLRT PSPVHPTGTS QPQRPEDCRP RGSVKGTGLD FACDIYIWAP LAGICVALLL SLIITLICYH RSRKRVCKCP SIACLCLKLQ GSKWYESVIC SALAVSIRCN KSKSGELPLA VHLDIRAPCK NWEIAGSLVE RYGKSGKHSP LSLKAVVESN

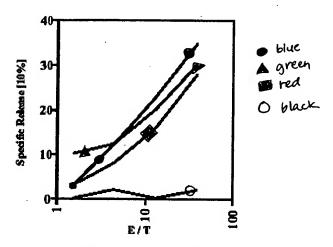
# mRNA - Coding

atggcctcac cgttgacccg ctttctgtcg ctgaacctgc tgctgctggg tgagtcgatt atcctgggga gtggagaagc taagccacag gcacccgaac tccgaatctt tccaaagaaa atggacgccg aacttggtca gaaggtggac ctggtatgtg aagtgttggg gtccgtttcg caaggatgct cttggctctt ccagaactcc agctccaaac tccccagcc caccttcgtt gtctatatgg cttcatccca caacaagata acgtgggacg agaagctgaa ttcgtcgaaa ctgttttctg ccatgaggga cacgaataat aagtacgttc tcaccctgaa caagttcagc aaggaaaacg aaggctacta tttctgctca gtcatcagca actcggtgat gtacttcagt tctgtcgtgc cagtccttca gaaagtgaac tctactacta ccaagccagt gctgcgaact ccctcacctg tgcaccctac cgggacatct cagccccaga gaccagaaga ttgtcggccc cgtggctcag tgaaggggac cggattggac ttcgcctgtg atatttacat ctgggcaccc ttggccggaa tctgcgtggc ccttctgctg tccttgatca tcactctcat ctgctaccac aggagccgaa agcgtgtttg caaatgtccc agtatagcat gcttgtgcct caaactgcaa ggaagcaagt ggtatgaatc tgtgatctgc tcagctctgg ctgtgagcat cagatgtaac aaatcaaagt caggagaact gcctttagcg gtgcacctgg acatcagagc cccttgtaag aactgggaaa ttgctggcag tctagtggag cggtacggta aatctggaaa acactccct ctgtcactga aggctgtagt agaatccaat taa



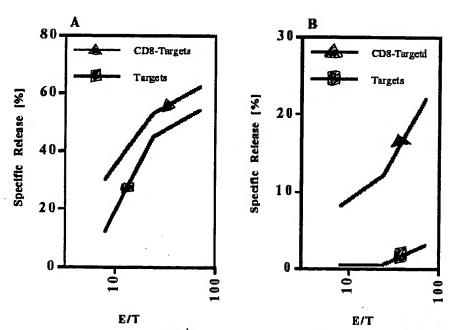
with normal fibroblasts (blus), medium (sed) or fibroblasts with CD8 (special) of mouse (A) or human (B) origin. Cultures were harvested and tested for their lytic ability towards C57BL/6-derived target cells.

Figure 3



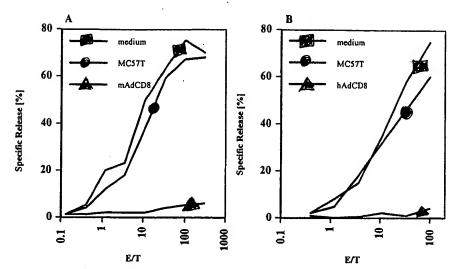
Balb/c (H-2d) mice were injected with control fibroblasts (red and green) or mCD8-transfected C57BL/6-(H-2b) derived (black and blue) fibroblasts. After two weeks animals were sacrifized, spleen cells were barvested, stimulated with C57BL/6 (H-2b) (red and black) or CBA/J (H-2k) (blue and green) spleen cells and tested for their lytic ability on BLA (H-2b) (red and black) or S.AKR (H-2k) (blue and green) target cells.

# Figure 4



Target cells (green) or CD8-expressing targets (red) were tested for their susceptibility to lysis by alloreactive T cells (A) or by antigen-specific CTLs (B).

Figure 5



Circle MLCs (Baib/c anti-C57BL/6) were set up in the presence of normal fibroblasts (blue) and fibroblasts transduced with mAdCD8 (A, green) or hAdCD8 (B, green). No fibroblasts were added to control cultures (red). The lytic activity of these cultures towards an C57BL/6-derived target was determined at the end of the culture period.

Figure 6

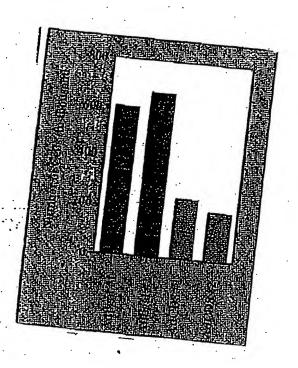


FIGURE 7

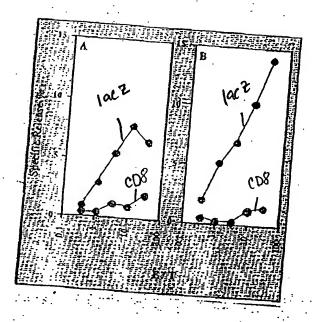
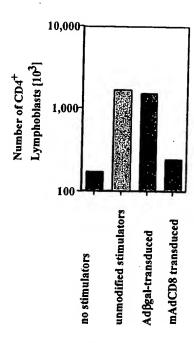


FIGURE 8

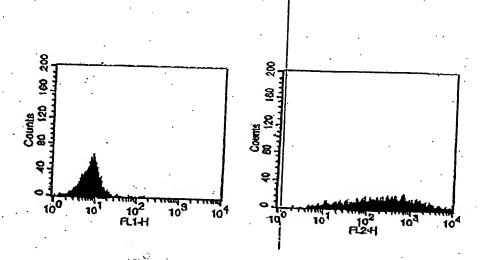


3x106 C7Bl/6 spleen cells were incubated with 1x106 (or no) stimulator cells, transduced as indicated. After 4 days the cultures were analyzed for presence CD4 <sup>+</sup> T lymphoblasts by immunofluorescence.

Figure 9

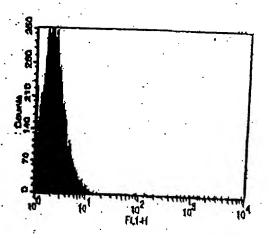
FIGURE 10A

Infected Cells: MC57T Fibroblasts
Panel 1: Mock-Infection; Panel 2: Infection with hAdCD8



# FIGURE 10B

Infected Cells: MC57T Pibroblasts
Panel 1: Mock-Infection; Panel 2: Infection with mAdCD8



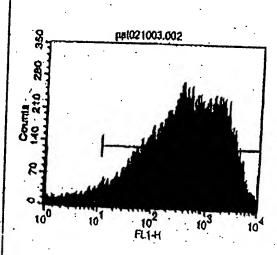
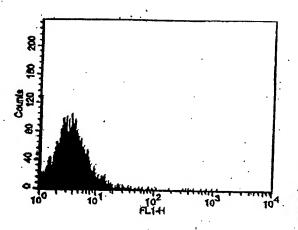
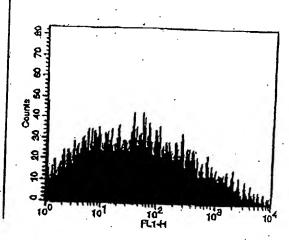


FIGURE 10C

Infected Cells: Balbe unsplected bone marrow cells: Panel 1: Infection with lacZ Adenoviral Vector (AdLacZ);

Panel 2: Infection with mAdCD8

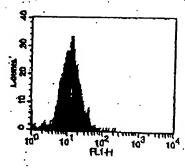


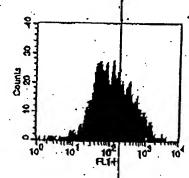


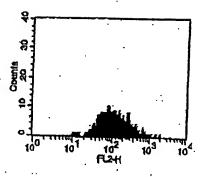
# FIGURE 10D

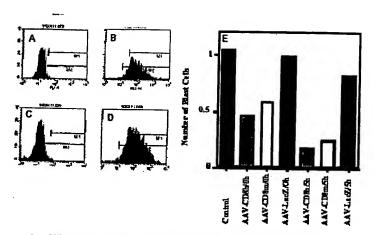
Infected Cells: MC57T Fibroblasts
Panel 1: Mock-Infection;

Panel 2: Infection with pAAV-mCD8; Panel 3: Infection with pAAV-hCD8









Fibroblasts were transduced with mAAVCD8 (B) or hAAVCD8 (D) or mock-infected (A and C). Surface expression of CD8 was detected by surface immunofluorescence (A through D). MLCs (Balb/c anti-C57BL/6) were set up in the presence of these fibroblasts that had been cultured for 0 or 5 hours after transduction before they were added to the MLCs. At end of cultures, the number of lymphoblasts was determined on a fluorescence activated cell analyzer.

Figure 11

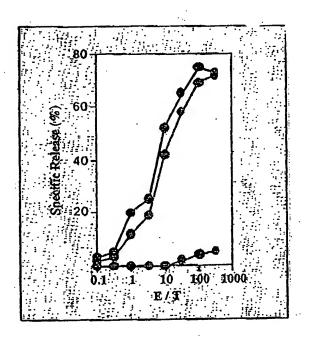
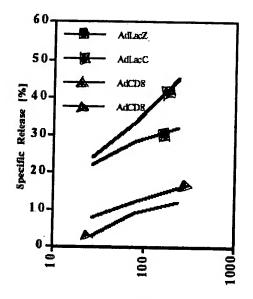


FIGURE 12

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Hable Balbe mise were immunized with AdLacZ (green) or mAdCD8 (sed). Their spleen cells were cultured in the presence of AdLacZ and tested for specific lytic activity against AdLacZ infected syngencic P815 target cells.

Figure 13

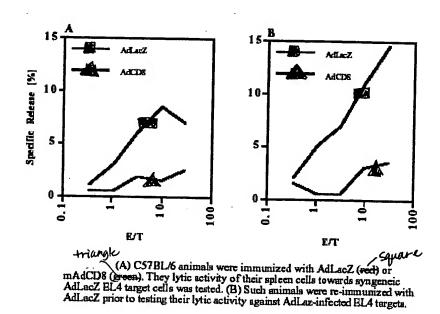
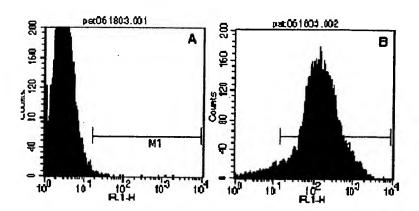
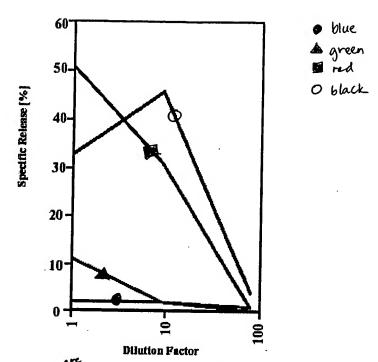


Figure 14A-B



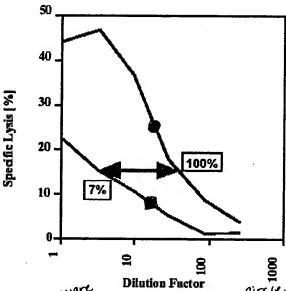
Single cell suspensions were prepared from newborn hearts. The heart muscle cells were transduced with mAdCD8 (B) or mock-infected, cultured for 48 hours and stained for the surface expression of CD8.

Figure 15



Newborn C57BL/6 hearts were infected with 109 (red), 5x107(green), 107(blue) PFU AdCD8 or mock-infected (black). Thirtyfive days after transplantation into BALB/c recipients, the activity of the lytic activity of activated recipient T cells was tested on donor-type target cells.

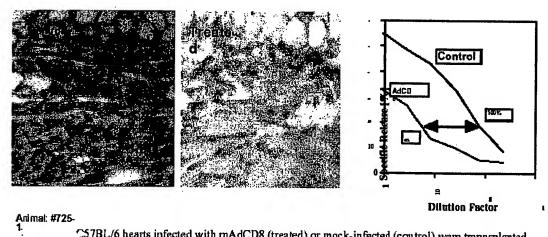
Figure 16



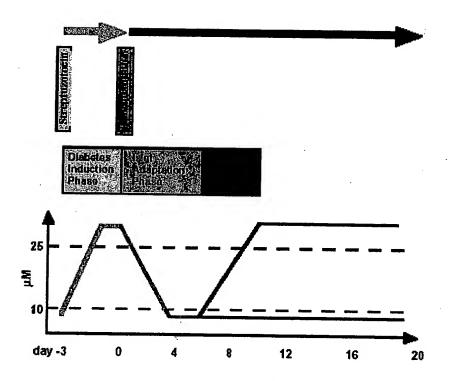
Dilution Factor

Newborn C57BL/6 hearts were infected with AdCD8 (red) or mock-infected (bleek). Thirtyeight days after transplantation into BALB/c recipients, the activity of the lytic activity of activated recipient T cells was tested on donor-type target cells.

Figure 17

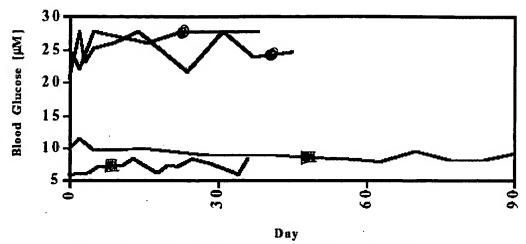


57BL/6 hearts infected with mAdCD8 (treated) or mock-infected (control) were transplanted into Balb/c mice. After 52 days, the animals were sacrificed and the tissue was stained (HE) and the lytic activity of recipient T cells was tested on donor-type target cells.



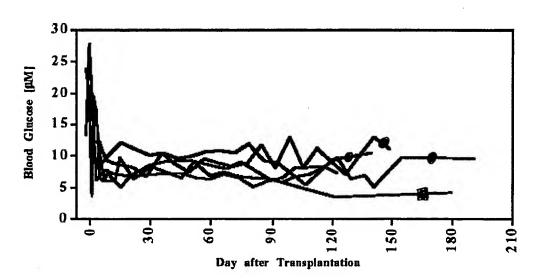
Pancreatic islet transplantation protocol.

Figure 19



Blood glucose levels in normal (red) and Streptpzotocin-treated (blue) mice.

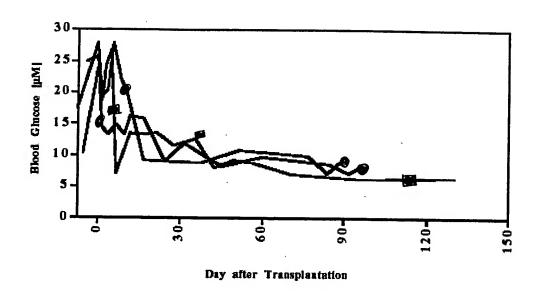
Figure 20



Square coile.

Syngeneic pancreatic islet transplants performed in Balb/c (sed) and in C57BL/6 (blue) mice.

Figure 21



Transplantation of syngeneic mAdCD8-transduced pancreactic islets harvested from Balb/c (blue) or C57BL/6 (red) mice.

Figure 22

# Allogeneic Islet Transplantation

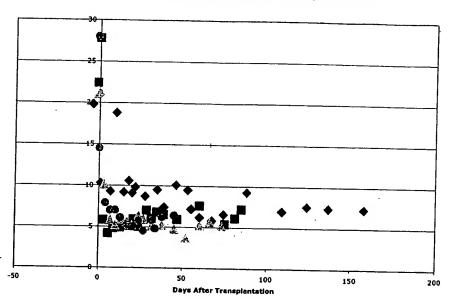


Figure 23

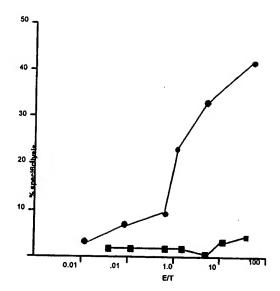
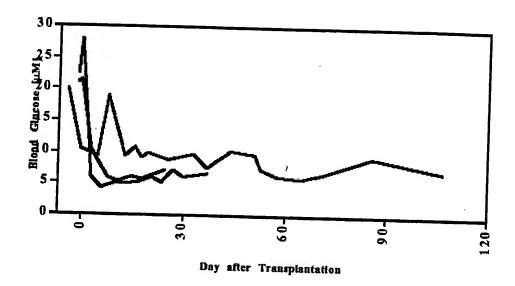


Figure 24



Balb/c recipient mice.

Figure 25